



## Feed the Future Country Fact Sheet

Online Version: <https://www.feedthefuture.gov/article/award-fellow-investigates-impact-cooking-fuel-nutrition-conservation-and-income-community>

## AWARD Fellow Investigates Impact of Cooking Fuel on Nutrition, Conservation and Income for Community Groups



AWARD

Dr. Mary Njenga researched how cooking with charcoal briquettes impacts nutrition, health and the environment in Kenyan communities.

In Kenya, community groups led primarily by women and youth have played a critical role over the past decade in reducing the cost and environmental impact of cooking fuel by developing and expanding the use of charcoal briquettes in household cooking.

Briquettes are made by mixing waste charcoal dust with water and a binding agent, and they are an inexpensive and environment-friendly alternative to firewood or charcoal in its commercialized form.

Mary Njenga, who holds a doctorate in management of agro-ecosystems and environment from the University of Nairobi, is a 2009 recipient of a fellowship from the [African Women in Agricultural Research and Development](#) (AWARD) program supported by Feed the Future in partnership with the Bill & Melinda Gates Foundation.

Njenga has spent more than three years investigating how poor Kenyan households and communities are impacted by this innovative fuel solution and is the lead author in [a new study](#) sponsored by the [World Agroforestry Center](#) showing that by 2010, some of the most successful community groups producing these briquettes were making up to \$2,000 monthly from sales, and that women in those communities were slashing their cooking fuel costs to a tenth or less of what they had previously spent. The briquettes can also allow families to consume a wider range of nutritious foods.

"I was alarmed to find that the poorest households in Nairobi often chose food on the basis of how fast it cooked, in order to save on energy. Briquettes cost so much less than traditional fuels, and are allowing more women to cook a wider range of food, for better nutrition," says Njenga.

Cooking a standard meal of maize and beans with charcoal briquettes costs just three Kenyan shillings, or about \$0.04. This is nine times cheaper than cooking the same meal with charcoal and 15 times cheaper than cooking it with kerosene. Furthermore, the clean burn of charcoal briquettes dramatically reduces indoor air pollution and lowers the risk of respiratory illness, a leading cause of death in sub-Saharan Africa.

Charcoal briquettes can also help conserve natural resources by reducing household reliance on firewood. This has particular labor-saving implications for women and girls, who are typically responsible for the time-consuming task of collecting wood for household fuel needs.

Milka, a 30-year-old mother of two, is a member of the self-help group “Kahawa Soweto Youth in Action,” one of 15 community-based groups Njenga has worked with in Nairobi slums. Milka sells briquettes to villagers in a community about 80 kilometers west of Nairobi and close to the Aberdare forest, one of Kenya’s most important water catchment areas and game reserves.

“Instead of spending hours collecting firewood, the women in these villages buy my briquettes so they can spend more time on farming,” Milka told Njenga. “It also relieves them of the pain of carrying firewood on their backs for several kilometers daily.”

As a result of her research, Njenga is advocating for policy solutions to support community groups like Kahawa Soweto Youth in Action in the production and marketing of briquettes, which she believes have huge potential to contribute to sustainable development in Kenya.

“Space to make and sell the briquettes, reliable and affordable water, and better links with institutions generating waste paper [used for binding the briquette] are just a few examples of support that would really help these community groups,” she says.

[Read more](#) from the World Agroforestry Center about charcoal briquetting in Kenya.